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THE PLANT DISEASE REPORTER

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THE PLANT DISEASE SURVEY, DIVISION OF MYCOLOGY AND DISEASE SURVEY
BUREAU OF PLANT INDUSTRY, AGRICULTURAL RESEARCH ADMINISTRATION
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The Plant Disease Reporter is issued as a service to plant pathologists throughout the United States. It contains reports, summaries, observations, and comments submitted voluntarily by qualified observers. These reports often are in the form of suggestions, queries, and opinions, frequently purely tentative, offered for consideration or discussion rather than as matters of established fact. In accepting and publishing this material the Division of Mycology and Disease Survey serves merely as an informational clearing house. It does not assume responsibility for the subject matter.

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The "golden nematode" of potatoes has become established in one Long Island area, according to B. G. Chitwood, R. L. Clement, R. Morgan, and R. Tank, page 390.

John Ehrlich reports, page 391, on a number of tree diseases that have been unusually prominent in Idaho during this season, including some not previously recognized in this country, or in the State.

James G. Dickson reports that preliminary results of a barley-blight survey show local areas of severe damage, page 394.

Potato late blight occurred in Nebraska this year, for the first time, according to J. E. Livingston and M. W. Felton, page 395. Other brief notes report the reintroduction of tobacco black shank into Kentucky, by E. M. Johnson and W. D. Valleau; incidence of grain diseases in South Dakota, by W. F. Buchholtz; and spotting of cherry fruits due to the leaf-spot fungus.

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HETERODERA ROSTOCHIENSIS, THE GOLDEN NEMATODE OF POTATOES, IN NEW YORK STATE

B.G. Chitwood, U.S. Dept. Agriculture; R.L.Clement, R. Morgan, and R.Tank, N.Y. State Dept. Agriculture and Markets

In 1941 Cannon (Nassau County Farm and Home Bureau News v. 27(8): 3) reported on the occurrence of the potato nematode, Heterodera rostochiensis Wollenweber 1923, in New York, basing his report on identifications made by the senior author. At that time 2 adjoining fields, consisting of approximately 110 acres, were known to be infested. Since this is the first reported occurrence of H. rostochiensis in the United States, it is of considerable interest. Inasmuch as the potato is attacked by at least 4 different important nematode pests, namely the root-knot nematode, Heterodera marioni (Cornu 1879) Goodey 1932, the bulb or stem nematode, Ditylenchus dipsaci (Kühn 1857) Filipjev 1936, the meadow nematode, Pratylenchus pratensis (de Man 1880) Filipjev 1936, and the present form, i.e. H. rostochiensis, it is proposed to name the latter the golden nematode of potatoes to supply a convenient term for the layman. The name is based on the golden appearance of the female nematode as it is seen by the naked eye on the roots and tubers during a phase of its development.

During the current season a survey of certain potato fields was conducted by the New York Department of Agriculture and Markets in cooperation with the Bureau of Plant Industry of the United States Department of Agriculture. The survey covered a block in Nassau County, Long Island, containing a total of 4841 acres of potato land and representing 147 individual fields. The golden nematode of potatoes was found in 419 acres, representing 14 fields. All of these fields were in close approximation to one another, the entire infested area being only 1 1/2 miles long and 1 mile wide. The first field in which this nematode was found in 1941 is centrally located in the area and appears to have been the locus of infestation for the area. Presumably the nematode was introduced into this field on diseased seed potatoes 10 to 14 years ago. After 4 to 8 years the soil infestation had been built up to such an extent that there was noticeable injury to the crop. Since its original introduction the disease has spread from field to field by the potato digger, plowing, flooding, and possibly by wind storms. The outside source from which the disease was introduced remains undetermined.

Heterodera rostochiensis apparently requires several years in which to build up a population sufficient to cause crop damage. Its first field symptoms are noticed as spots or strips in which the potato vines do not make a strong growth and weeds predominate. Examination of the roots of potato plants in the latter part of June and early in July discloses the presence of small white to golden spherical glistening bodies about the size of a pinhead, attached to the roots and sometimes to the tubers. These are the females of the golden nematode of potatoes, H. rostochiensis. Apparently this nematode does not cause disfiguration of the tubers nor does it cause knotted roots as does H. marioni. The injury which it produces takes the form of stunted vines and reduction in size of tubers. In 1941 Cannon found a 30% reduction in the yield of variety Irish Cobbler and a

70% reduction in the yield of variety Warba due to the golden nematode of potatoes. In 1942, the writers found a 70% reduction in the yield of Green Mountain potatoes due to it. Actually the financial loss is considerably greater than is indicated by such figures since most of the potatoes grade Number 2 or 3 and few Number 1's are produced.

Late in the season (last week in July and first part of August) the female nematodes turn brown and tend to drop off the roots and tubers. At this time field inspection is difficult. However, soil flotations may be made at any time of year to ascertain the presence of the nematodes. The brown cysts (females) float to the surface when soil is mixed with water. The finding of brown cysts is not in itself a diagnosis for H. rostochiensis since another species of the genus, Heterodera schachtii Schmidt 1871, is sometimes present in the soil. Cysts of the latter form tend to be lemon-shaped rather than spherical; its natural host in this region is Polygonum pensylvanicum L., or Pennsylvania smartweed. This weed is common in potato fields as well as other cultivated lands of Nassau and Suffolk Counties. H. schachtii has been found on smartweed in various parts of Nassau County and in the vicinity of Easthampton, Suffolk County. The distribution is not related to the distribution of H. rostochiensis.

At the present time Heterodera rostochiensis appears to be spread within fields and from field to field by the following means: (1) mechanical, - use of the potato digger, plowing and cultivating; (2) drainage, - since the nematode cysts float they naturally spread in the direction of water flow; (3) wind, - dust storms are common in the area; (4) use of soiled bags. The danger of use of bags in clean fields following their use for picking up potatoes in infested fields is ever present. Thus far there is no evidence of spread by the planting of seed potatoes from infested fields since the original introduction of the nematode many years ago. Natural barriers in the form of hedge rows and waste land have been very important in the confinement of the disease to its present area.

The following recommendations have been made for the isolation and confinement of the golden nematode of potatoes to its present distribution: (1) Avoid hauling soil from field to field; clean all implements following use on infested land; do not turn on neighboring fields; do not use soiled bags for picking up potatoes from clean fields. (2) Cultivate and plant parallel to known strips of infestation. (3) Plant at right angles to direction of drainage when not contraindicated by direction of infested strips. (4) Do not use potatoes from infested fields for seed purposes. (5) Plant barrier crops on the periphery of known infestations. These include corn, oats, string beans, cabbage, rape, and mustard.

RECENTLY ACTIVE LEAF DISEASES OF WOODY PLANTS IN IDAHO

John Ehrlich

Abnormally high rainfall in Idaho during the late summer of 1941 and the late spring and early summer of 1942 is assumed to have favored natural inoculation for a number of fungi. At any rate, several fungous diseases of the leaves of woody plants became sufficiently active in 1941 and 1942

to result in widespread notice of their symptoms. Some new or noteworthy cases are reported herewith.

Western Larch (Larix occidentalis Nutt.)

Needle blight or leaf cast. -- A severe early-season browning of larch foliage (distinct from the more enphytotic disease caused by Hypodermella laricis Tub.) has been conspicuous for the past 2 seasons on trees of all ages in the majority of the larch stands of northern Idaho. The disease was also observed in central Washington east of the Cascade Crest along U. S. Highway 410 between American River and Chinook Pass. A considerable amount of reproduction has already been killed and any further yearly outbreaks of like severity will doubtless cause retardation of growth and some mortality in older trees.

Every specimen examined microscopically proved to bear the inconspicuous fruiting structures of Meria laricis Vuill. 1/, which is widespread and injurious on the continent of Europe and in Great Britain on the native L. decidua Mill. and also occurs in British plantings of L. occidentalis 2/. The fungus does not appear to have been recognized heretofore in North America but is now doubtless firmly established in the Pacific Northwest.

Needle rusts. -- At least a part of the early-season browning of larch foliage in northern Idaho was caused by needle rusts which were more abundant than usual (according to observations by A. W. Slipp). Of these, Melampsora bigelowii Thuem. was certainly active, and possibly also M. medusae Thuem. and M. occidentalis Jacks. Later in the season, aecial and telial stages were abundant on several species of Salix, and on Populus tremuloides Michx. var. aurea (Tidestr.) Daniels, P. hastata Dode, and P. balsamifera L.

Lodgepole Pine (Pinus contorta Loud. var. latifolia Engelm.)

Needle blight or leaf cast. -- A less conspicuous browning and casting of one-year-old needles on lower branches of lodgepole pine has been observed for at least 4 years in Idaho County and in the last 2 years has become more widespread and injurious. Although Hypodermella concolor (Dearn.) Darker and Elytroderma deformans (Weir) Darker occur on many of the affected trees, the most common associate of necrosis is an apparently undescribed species of Hendersonia. Sustained infection reduced needle retention from the normal span of 5-8 years to but a single year, with consequent lowering of tree vigor, accelerated loss of lower branches, and death of young trees.

Western Redcedar (Thuja plicata D. Don)

Leaf blight. -- In addition to Didymascella thujina (Durand) Maire and 2 or more species of Coryneum, Chloroscypha seaveri (Rehm) Seaver 3/ has

1/ Identification confirmed by Miss E. K. Cash.
2/ Vide Peace, T. R., and C. H. Holmes. Oxford Forestry Memoirs No.15;1933.
3/ Several collections by A. W. Slipp were identified by Dr. Fred J. Seaver.

been found repeatedly associated with death of western redcedar twigs in various parts of northern Idaho. The latter fungus has been reported heretofore apparently only from the type locality in adjoining western Montana.

Golden Aspen (Populus tremuloides Michx. var. aurea (Tidestr.) Daniels)

Shoot blight. -- Early in the 1942 growing season Fusicladium radiosum (Lib.) Lind 4/ (= Napicladium tremulae (Frank) Sacc., the conidial stage of Didymosphaeria populina Vuill.) was conspicuously aggressive in the leaves and twigs of golden aspen throughout northern Idaho and sporulated luxiantly on the moister sites.

Ink spot. -- Sclerotium bifrons Whetzel (the imperfect stage of Sclerotinia bifrons Seaver & Shope) was unusually abundant during the past summer on aspen in central and southern Idaho (according to observations by R. K. Pierson and P. Proctor, Jr.).

Leaf rust. -- The uredial and telial stages of Melampsora albertensis Arth. developed so intensely during 1941, especially in central Idaho, that aspen foliage turned yellow and dried by mid-summer. This species and possibly also M. medusae Thuem. were also unusually abundant in northern Idaho during 1942.

American Sycamore (Platanus occidentalis L.)

Anthracnose and twig blight. -- Numerous specimens and inquiries from communities in southwestern Idaho indicated that Gloeosporium nervisequum (Fckl.) Sacc. (the imperfect stage of Gnomonia veneta (Sacc. & Speg.) Kleb.) was unusually injurious on shade trees during the early summer of 1942.

Sitka Alder (Alnus sinuata (Regel) Rydb.)

Leaf spot. -- Septoria alnifolia Ell. & Ev. 5/ was abundant during early summer 1942 on Sitka alder in the Salmon River Valley below Salmon City in central Idaho (according to specimens received, and observations by P. Proctor, Jr.). The fungus has not apparently been reported previously in Idaho.

Sticky Currant (Ribes viscosissimum Pursh)

Leaf spot. -- A severe spotting of the leaves of sticky currant has been common on shaded sites in northern Idaho during the past 2 seasons. The associated fungus is close, but apparently not identical, to Cylindrosporium ribis Davis 6/, which in turn may be conspecific with Septoria sibirica Thuem. 7/.

(SCHOOL OF FORESTRY, UNIVERSITY OF IDAHO.)

4/ Identification confirmed by Miss E. K. Cash.
5/ Identification confirmed by Miss E. K. Cash.
6/ Authentic specimens examined through courtesy of Dr. H. C. Greene.
7/ No authentic specimens examined. Vide Davis in Trans. Wisc. Acad. Sci. 19: 673. 1919.

BARLEY SCAB AND BLIGHT PRESENT IN LOCAL AREAS IN THE 1942 CROP

James G. Dickson

Blight-damaged barley occurs in local sections throughout the spring-barley area. The damage extends westward into Kansas, Nebraska, and the Dakotas. Reports from various states, limited field surveys, and samples from car lots received from the terminal markets indicate local blight areas ranging from light to severe infections. Receipts of barley inspected at central-western markets during the period of August 1-15 indicated blight was more severe than in 1941. Seven percent graded blighted, compared with 1% for the same period last year. Samples from 22 car lots have been received for plating during the first half of August. Twenty of these have over 4% blight damage. Blight damage appears to be more severe through Iowa and Minnesota and westward.

Table 1. -- Preliminary data of percentage distribution of the 4 principal organisms isolated from blighted barley kernels from the 1942 crops.

Location	Organisms isolated			
	Gibberella saubinetii	*Fusarium* spp.	*Helminthosporium sativum*	*Alternaria* spp.
Northern Iowa	43	29	14	14
Southern Minnesota	50	11	19	20
Northern Minnesota	3	37	12	48
Southern Wisconsin[a]	18	3	52	27
Northern Wisconsin[a]	0	56	22	22
South Dakota	9	5	62	24
Nebraska	3	15	55	27
Kansas	14	0	14	71

a/ Isolations from head samples obtained in disease surveys, no car-lot samples included.

The preliminary platings from survey and car-lot samples indicate *Gibberella saubinetii* (Mont.) Sacc. [*G. zeae*], *Fusarium* spp., *Helminthosporium sativum* P. K. and B., and *Alternaria* spp. the predominating organisms as shown in Table 1. *Gibberella* is confined largely to the Corn Belt section of the spring-barley area. *Helminthosporium* as usual predominates in the more western area and is high in southern Wisconsin based on head samples only. The rather high percentage of *Fusarium* spp., mostly of the Sporotrichiella group, is somewhat unusual.

(COOPERATION BETWEEN THE DIVISION OF CEREAL CROPS AND DISEASES AND THE WISCONSIN AGRICULTURAL EXPERIMENT STATION.)

BRIEF NOTES ON PLANT DISEASES

POTATO LATE BLIGHT RECORDED IN ANOTHER STATE: FIRST REPORT FOR NEBRASKA: Late blight (Phytophthora infestans) was observed in the early potato region of central Nebraska this year. This is the first recorded appearance of the disease in the State. Severe leaf defoliation occurred in the vicinity of Comstock and Burwell in the Loup River Valley. No definite tuber infection could be found and isolations from questionable discolored areas on the tuber did not yield the late-blight organism. However, some tuber infection occurred in the early potato region between Kearney and Grand Island.

Prior to the first of July the weather conditions were very favorable for the development of blight in these regions. Above normal rainfall and cool temperatures (below normal) prevailed throughout most of the growing season. (J. E. Livingston and M. W. Felton, Department of Plant Pathology, Nebraska Agricultural Experiment Station, Lincoln).

[NOTE: First authenticated reports from other States in recent years are Kansas, 1935, reported by C. H. Elmer, PDR Suppl. 96:228. 1936; Colorado, 1941, reported by W. A. Kreutzer and John G. McLean, PDR 26:91. Mar. 1, 1942; North Dakota, 1942, reported by G. H. Godfrey, PDR 26:372. Sept. 1, 1942.]

A NEW INTRODUCTION OF TOBACCO BLACK SHANK INTO KENTUCKY: On August 18, 1942, County Agent G. H. Karnes of Marion County, Kentucky, brought Burley tobacco plants affected with black shank [Phytophthora parasitica var. nicotianae] to the laboratory. These plants came from one corner of a field about 2 miles northwest of Lebanon. Mr. Karnes reported the following observation which was later confirmed by a visit to this farm by the writers. The grower hauls, by truck, fruits and vegetables, and tomato, cabbage, and sweetpotato plants, from Florida and Georgia. The garage where the automobile truck is stored is adjacent to the corner of the field where black shank first appeared. Mr. Karnes surmised that, after unloading, the truck was backed into the field adjacent to the garage and swept free of soil and plant debris. The grower stated that this had occurred at least once after hauling plants from the South. This appears to be a case of transporting a serious plant disease, either on soil or plant debris, to a region previously free of the disease, because this is the first and only known occurrence of black shank in Marion County. This makes the seventh area where the disease has appeared in the State. All are rather widely separated.

Drainage from this farm traverses Marion, Washington, Nelson, and Bullitt Counties before emptying into the Ohio River south of Louisville. Much tobacco is grown in the river and creek bottoms of these 4 counties and might be menaced by black shank from the infested area in Marion County. (E. M. Johnson and W. D. Valleau, Kentucky Agricultural Experiment Station).

SMALL GRAIN DISEASES IN SOUTH DAKOTA: Leaf rust [Puccinia rubigo-vera tritici] was the principal cause of disappointing yields of Thatcher wheat in the eastern half of South Dakota in 1942.

Around Brookings the scab fungus [Gibberella zeae] infected fully 50% of the kernels, usually the entire heads up to 30% or more of the crop. I can't remember ever having seen anything like it before.

Stem rust [P. graminis] damage was practically nil in South Dakota in 1942. That was the only bright aspect of the small grain disease picture in the eastern half of the State. Despite the absence of stem rust, the barley crop was perhaps the biggest disappointment. Helminthosporium [sativum] spot blotch and bacterial blade blight [Phytomonas translucens] had defoliated all commercial barley by July 4. Root rot was prevalent and the final crop, in the face of outstanding prospects earlier, was scarcely a third of what it might have been. Wheat, oats, and rye were also only half a crop in the eastern third of the State. (W. F. Buchholtz, South Dakota Agricultural Experiment Station, Brookings. September 9).

SPOTTING OF CHERRY FRUITS CAUSED BY THE LEAF-SPOT FUNGUS: F. A. Hodges of the Microanalytical Division, Food and Drug Administration, found the Cylindrosporium stage, C. hiemalis, on sour cherries from the Sturgeon Bay area, Wisconsin, in July. The value of the fruit for canning was affected by the spotting. According to J. W. Roberts of the Bureau of Plant Industry, there are only occasional references to fruit infection by this fungus. He considers its occurrence on the fruit rather uncommon although he has found it on cherry fruits of the Morello variety.

CHECK LIST REVISION

Freeman Weiss

SPARTIUM (LEGUMINOSAE)

SPARTIUM JUNCEUM L., WEAVERSBROOM. Shrub of Mediterranean region; cult. for ornament, Zone VII, especially Calif.

Diplodia sarothamni Cke. & Hark., on twigs. Calif.
Pestalotia polychaetia Cke. & Harkn., on twigs. Calif.
Phoma sarothamni Sacc., on twigs. Calif. (A synonym of Phomopsis s. (Sacc.) Höhn., conidial stage of Diaporthe s. (Auer.) Nits., which is not reported from the U. S.)

SPIRAEA (ROSACEAE)

SPIRAEA spp.,(1) exotic flowering shrubs, mostly Oriental, commonly cult. for ornament, as S. CANTONIENSIS Lour., S. CHAMAEDRYFOLIA L., S. JAPONICA L. f., S. PRUNIFOLIA Sieb. & Zucc., S. THUNBERGII Sieb., S. TRILOBATA L.; also hybrids as S. BUMALDA, S. VANHOUTTEI and others; mostly hardy in Zone IV.

SPIRAEA spp. cont.
Cylindrosporium filipendulae Thüm., leaf spot. Iowa.
Diaporthe viburni Dearn. & Bisby var. spiraeicola Wehmeyer, on twigs. N. Y.
Diplodia spiraeicola Ell. & Ev., on twigs. N. Y.
Erwinia amylovora (Burr.) Winslow et al., fire blight. Md., N. J., N. Car., Va.
Heterodera marioni (Cornu) Goodey, root knot. Fla., Miss.
Heterosporium spiraeae Syd., on leaves. Alaska.
Microsphaera alni DC. ex Wint., powdery mildew. Conn.
Mycosphaerella sp., on leaves. Alaska.
Phomopsis spiraeae (Desm.) Grove, on twigs. Md.
Phymatotrichum omnivorum (Shear) Dug., root rot. Ariz., Texas.
Physalospora obtusa (Schw.) Cke., on twigs. Ga.
Phytomonas rhizogenes Riker et al., hairy root. Iowa.
Podosphaera oxyacanthae DC. ex DBy., powdery mildew. Widespread.

SPIRAEA spp., (2) native shrubs, as S. ALBA Du Roi, and S. LATIFOLIA (Ait.) Borkh., MEADOWSWEET, S. SALICIFOLIA L., WILLOWLEAF SPIRAEA (introduced from Europe and escaped), and S. TOMENTOSA L., HARDHACK, occurring in the Eastern and Central States; and S. DOUGLASII Hook., and S. MENZIESII Hook., of the Pacific Coast States; sometimes grown for ornament and hybridizing with other ornamental forms.

Ascochyta salicifoliae Trel. See Phleospora.
Belonidium spiraeae Dearn. & House, on dead twigs. N. Y.
Cercospora rubigo Cke. & Harkn., leaf spot. Calif., Kans., Oregon, Wis.
Cryptodiaporthe macounii (Dearn.) Wehmeyer, on twigs, ? canker. N. Y.
Cylindrosporium spp., leaf spot. Spp. reported include C. fairmanianum Sacc., N. Y.; C. salicifoliae (Trel.) Davis = Phleospora s.; C. spiraeicolum Ell. & Ev., Idaho.
Diaporthe viburni Dearn. & Bisby var. spiraeicola Wehmeyer, on twigs. Mass.
Gnomonia papillostoma Dearn. & House, on leaves. N. Y.
Phleospora salicifoliae (Trel.) Petr., leaf spot. N. Y. to Kans. and Wash. (Reported under various names as Ascochyta s. Trel., Cylindrosporium s. (Trel.) Davis, Septoria s. (Trel.) Ell. & Ev.; the last name has been generally used in the U. S.)
Physalospora obtusa (Schw.) Cke., on twigs. N. Y.
Podosphaera oxyacanthae DC. ex DBy., powdery mildew. Widespread.
P. o. var. tridactyla (Wallr.) Salm. Wash.
Ramularia spiraeae Pk., on leaves. N. Y.
Septoria salicifoliae (Trel.) Berl. & Vogl. See Phleospora.
Sphaerotheca castagnei Lév., powdery mildew. Pa.
S. humuli DC. ex Burr. Conn., Mich., N. Y., Pa.
Sporodesmium spiraeicolum Cke., on leaves. S. Car.
Thelephora terrestris Ehr. ex Fr., stem girdle of seedlings. Idaho.

SPONDIAS (ANACARDIACEAE)

SPONDIAS MOMBIN L., YELLOW MOMBIN. Tree of tropical America grown for edible fruit and ornament in S. Fla., C. America and West Indies.

Cerotelium alienum (Syd. & Butl.) Arth., rust (II, III). P. R.
Heterodera marioni (Cornu) Goodey, root knot. Fla.
Meliola comocladiae F. L. Stevens, black mildew. P. R.

STACHYTARPHETA (VERBENACEAE)

STACHYTARPHETA spp. Shrubs and herbs of tropical America sometimes grown for ornament.

Endophyllum stachytarphetae (P. Henn.) Whetzel & Olive, rust (III). On S. cajennensis Vahl, P. R.
Heterodera marioni (Cornu) Goodey, root knot. On S. dichotoma Vahl, T. H.
Irenina glabroides F. L. Stevens, black mildew. P. R.
Puccinia urbaniana P. Henn., rust (III). Virgin Is.

STAPHYLEA (STAPHYLEACEAE)

STAPHYLEA TRIFOLIA L., AMERICAN BLADDERNUT. Shrub or small tree of Growth Regions 22, 23, 24, 25, 26, 27, 28, 29; grown for ornament, Zone III. Several spp. of European and Oriental origin are more common in cult., but the available records pertain to this sp.

Coryneum microstictum Berk. & Br. var. staphyleae W. H. Davis, twig blight. Mass.
Diaporthe staphylina Ell. & Ev., on branches. Mich.
Eutypella fraxinicola (Cke. & Pk.) Sacc., on branches. Ga.
E. staphyleae Dearn. & House. N. Y.
Gloeodes pomigena (Schw.) Colby, on branches. Ind.
Hendersonia staphyleae Ell. & Ev., on twigs. Pa.
Hypomyces ipomoeae (Hals.) Wr., twig blight. Mass.
Hysterium staphylina (Pk.) Dearn. & House, on twigs. N. Y.
Leptosphaeria rubrotincta Ell. & Ev., on branches. Pa.
Metasphaeria staphyleae Dearn. & House and M. staphylina (Pk.) Sacc., on branches. N. Y.
Mycosphaerella staphylina (Ell. & Ev.) J. H. Miller, leaf spot. Ga., Kans.
Nectria atrofusca (Schw.) Ell. & Ev., on dead branches. Ga., Md., Pa., Va.
Ovularia isarioides (Ell. & Ev.) Sacc., leaf spot. N. Y. to Mo. and Iowa.
Phyllosticta staphyleae Dearn., on capsules. N. Y.
Septoria cirrhosa Wint., leaf spot. Mo.
Sphaeropsis staphyleae Brun., on dead twigs. N. J., N. Y.

STIGMAPHYLLUM (MALPIGHIACEAE).

STIGMAPHYLLUM spp. Woody vines of tropical America, sometimes grown for ornament.

Morenoella decalvans (Pat.) Theiss. var. stigmatophylli Ryan, black mildew. P. R.
Phyllachora inconspicua Chardon, on leaves. P. R.
Puccinia inflata Arth., rust (O, II, III). P. R., Virgin Is.

STRANVAESIA (ROSACEAE)

STRANVAESIA DAVIDIANA Dcne., CHINESE STRANVAESIA. Large evergreen shrub of China, cult. for ornament, Zone VII.

Clitocybe tabescens (Scop. ex Fr.) Bres., root rot. Fla.
Erwinia amylovora (Burr.) Winslow et al., fire blight. N. J.

STYRAX (STYRACACEAE)

STYRAX AMERICANA L., AMERICAN SNOWBELL. Shrub of Growth Regions 25, 27, 28, 29, 30; grown for ornament, Zone V. Including S. GRANDIFOLIA Ait., BIGLEAF SNOWBELL, of the southern part of the range.

Heterodera marioni (Cornu) Goodey, root knot. Md.

SWIETENIA (MELIACEAE)

SWIETENIA MAHAGONI Jacq., MAHOGANY. Large evergreen tree of C. America and West Indies, sometimes planted for shade in S. Fla.

Phyllosticta swietenia Alvarez Garcia, seedling blight. P. R.

SYMPHORICARPOS (CAPRIFOLIACEAE)

SYMPHORICARPOS ALBUS (L.) Blake, SNOWBERRY. Small shrub occurring nearly throughout the U. S.; the var. LAEVIGATUS (Fern.) Blake is cult. for ornament, Zone III. S. OREOPHILUS Gray, MOUNTAIN S. of the Western States, is included.

Alternaria sp., berry rot. Colo., Conn., Mass., N. Y. Has been designated A. solani forma symphoricarpi W. H. Davis but is of the general type A. brassicae (Berk.) Sacc.
Ascochyta symphoricarpophila Fairm., leaf spot. N. Y.
Botrytis cinerea Pers., berry rot. Conn., Mass., N. Y.
Cercospora symphoricarpi Ell. & Ev., leaf spot. Alaska, Mont., S. Dak.
Cladosporium sp., berry rot. Md., Va.
Colletotrichum sp. See Gloeosporium.

SYMPHORICARPOS ALBUS cont.

Diaporthe spiculosa (Alb. & Schw.) Nits., on twigs. N. Y.
Didymaria symphoricarpi Ell. & Ev., on leaves. Calif.
Diplodia symphoricarpi Sacc., on twigs. Calif., N. Y.
Fomes ribis (Schum. ex Fr.) Gill., collar rot. Kans., Mont.
Gloeosporium sp., berry and leaf spots. In part the conidial stage of the following (also reported as Colletotrichum sp.) but mostly Sphaceloma, q.v.
Glomerella cingulata (Ston.) Spauld. & Schrenk, anthracnose. Widespread. Ind., Mass., Mich., N. Y., Va.
Haplosporella symphoricarpi Pk., on dead twigs. N. Y.
Lasiobotrys symphoricarpi Syd., on leaves. Colo., Utah.
Microsphaera diffusa Cke. & Pk., powdery mildew. General.
Phyllosticta symphoricarpi Westend., leaf spot. N. Y., N. Mex., Wash.
Physalospora obtusa (Schw.) Cke., on twigs. N. J., N. Y.
Phytomonas tumefaciens (EFS. & Town.) Bergey, crown gall. Md.
Podosphaera oxyacanthae DC. ex DBy., powdery mildew. Wash.
Polyporus elegans Bull. ex Fr., on dead branches. Wash.
Puccinia crandallii Pam. & Hume, rust (O, I). N. Dak. to Mo., Calif. & Wash. II and III on Festuca and Poa spp.
P. symphoricarpi Hark., rust (III). Mont. to Colo., Calif. & Wash. Alaska.
Septoria signalensis Solheim, leaf spot. Wyo.
S. symphoricarpi Ell. & Ev. N. Dak. to Colo., Calif. & Wash.
Sphaceloma symphoricarpi Barrus & Horsfall, anthracnose, scab. Me. to Md., Ark. & Minn.; Calif., Colo., Oregon.

SYMPHORICARPOS OCCIDENTALIS Hook., WOLFBERRY. Small shrub of Growth Regions 15, 18, 21, 22, 23, 24; useful to wildlife.

Cercospora symphoricarpi Westend., leaf spot. Iowa, Kans., Mont., Nebr.
Cryptospora kansensis Ell. & Ev., on twigs. Kans.
Diaporthe spiculosa (Alb. & Schw.) Nits., on twigs. Kans.
Dibotryon symphoricarpi (Rehm) Petr., on twigs. N. Dak.
Diplodia symphoricarpi Sacc., on twigs. Kans.
Dothichiza symphoricarpi Petr., on twigs. N. Dak.
Fomes ribis (Schum. ex Fr.) Gill., on dead branches. N. Dak.
Microsphaera diffusa Cke. & Pk., powdery mildew. Widespread.
Nectria coryli Fckl., on twigs. N. Dak.
Pezizella dakotensis Rehm, on twigs. N. Dak.
Puccinia crandallii Pam. & Hume, rust (O, I). Colo., Mont., N. Dak., Wyo.
Septoria symphoricarpi Ell. & Ev., leaf spot. Mont., N. Dak., Wash.
Thyronectria lonicerae Seeler, on twigs. Colo., N. Dak.
Valsa symphoricarpi Rehm, on dead twigs. N. Dak.
Valsaria symphoricarpi (Ell. & Ev.) Theiss. & Syd., on dead twigs. Alaska, Mont., N. Dak.

SYMPHORICARPOS ORBICULATUS Moench., CORALBERRY. Shrub of Growth Regions 18, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30. Sometimes grown for ornament, Zone II, and useful to wildlife and in soil conservation.

Alternaria sp., berry rot. Conn.
Cercospora symphoricarpi Ell. & Ev., leaf spot. Kans., Nebr., Texas.
Cryptospora kansensis Ell. & Ev., on twigs. Kans.
Helicobasidium purpureum (Pat.) Tul., root rot. Texas.
Microsphaera alni DC. ex Wint., powdery mildew. Ind., Ohio, W. Va.
M. diffusa Cke. & Pk. Widespread.
Phomopsis sp., stem gall. Md.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Puccinia crandallii Pam. & Hume, rust (C, I). Kans., Mo., Okla.

SYMPLOCOS (SYMPLOCACEAE)

SYMPLOCOS TINCTORIA (L.) L'Her., COMMON SWEETLEAF. Evergreen shrub or small tree of Growth Regions 27, 28, 29, 30; sometimes grown for ornament, Zone VII. Records on S. PANICULATA (Thunb.) Miq., SAPPHIRE-BERRY SWEETLEAF, of China, which is hardy in Zone V, are included.

Exobasidium symploci Ell. & Mart., bud gall. Gulf States to N. Car. to Ind.
Leptothyrium symploci (Cke.) F. Tassi, on leaves. S. Car.
Mycosphaerella sp., on leaves. Ga.
Septoria symploci Ell. & Mart., leaf spot. Fla., Miss., N. Car.
S. stigma Berk. & Curt., leaf spot. Ala.
S. tinctoria Dearn. & House. Ark.

SYNCARPIA (MYRTACEAE)

SYNCARPIA GLOMULIFERA Niedenz., TURPENTINE TREE. Evergreen tree of Australia grown in Far South for ornament.

Heterodera marioni (Cornu) Goodey, root knot. Fla.

SYRINGA (OLEACEAE)

SYRINGA AMURENSIS Rupr., AMUR LILAC. Shrub or small tree of Manchuria, cult. for ornament, Zone IV.

Phymatotrichum omnivorum (Shear) Dug., root rot. Texas. Also on S. chinensis Willd.

SYRINGA PERSICA L., PERSIAN LILAC. Shrub of W. Asia, cult. chiefly in the var. INTEGRIFOLIA Vahl., Zone V; also in hybrids with S. VULGARIS.
Cercospora lilacis (Desm.) Sacc., leaf spot. Miss.
Microsphaera alni DC. ex Wint., powdery mildew. Ill., Iowa, Minn., Nebr.

SYRINGA VULGARIS L., COMMON LILAC. Shrub or small tree of S.E. Europe, long cult. for ornament, Zone III; sometimes locally naturalized. Records on horticultural lilacs in general are given here though some of the hosts belong to hybrids of this with various Asiatic spp.

Alternaria spp., on spotted leaves (probably mostly secondary but sometimes extending other lesions; both A. tenuis Auct. and A. brassicae (Berk.) Sacc. types occur.) Cosmopolitan.
Armillaria mellea Vahl ex Fr., root rot. Calif., Miss.
Ascochyta syringae Bres., on leaves. Oregon.
Botrytis cinerea Pers., gray mold blight. N.E. States, Pacific Northwest.
Cercospora lilacis (Desm.) Sacc., leaf spot. Widespread.
C. macromaculans Heald & Wolf. Iowa, Okla., Texas.
Cladosporium sp.(?C. herbarum Lk.), leaf blotch (probably mostly secondary). Cosmopolitan.
Corticium stevensii Burt, thread blight. Fla., Miss., N. Car.
Dendrophoma albomaculans (Schw.) Starb. and D. syringae Dearn., on twigs. N. Y.
Diaporthe medusaea Nits., on branches. Me.
Dothiorella berengeriana Sacc., on branches. Ohio.
Gloeosporium syringae Allesch. (? Glomerella cingulata (Ston.) Spauld. & Schrenk.), ? shoot blight. Conn., Mass.
Heterosporium syringae Oud., leaf blotch (following bacterial blight). N. J.
Hymenochaete agglutinans Ell., stem girdle. Conn.
Macrophoma halstedii (Ell. & Ev.) F. Tassi, leaf spot. Conn., N. J., N. Y.
Macrosporium sp. See Alternaria and Pleospora.
Microsphaera alni DC. ex Wint. , powdery mildew. General.
Myxosporium depressum Sacc., on twigs. Ohio, N. Y., Va.
Phomopsis depressa (Lév.) Trav., on twigs & capsules. Ohio, N. Y. Conidial stage of Diaporthe eres Nits.
Phyllosticta sp., leaf spot. Mass.
(P. halstedii Ell. & Ev.): Macrophoma halstedii.
P. porteri Tehon & Daniels. Ill.
P. syringae Westend. (? Ascochyta syringae). Wash.
P. syringella (Fckl.) Rabh. (as Phoma syringae Fckl.), on leaves. N. Y., Wis.
Phymatotrichum omnivorum (Shear) Dug., root rot. Ariz., Texas.
Physalospora obtusa (Schw.) Cke., on twigs & branches, ? dieback. Mass. to Va. & Ohio.
Phytomonas syringae (Van Hall) Bergey, bacterial blight, twig canker. N.E. States to Ala. and Ill.; Pacific Coast States.
P. tumefaciens (EFS. & Town.) Bergey, crown gall. Conn.
Phytophthora cactorum (Leb. & Cohn) Schroet., blossom blight, dieback. Iowa, Md., Mass., Minn., N. J.
P. syringae Kleb., shoot blight. Md., N. Y.

SYRINGA VULGARIS cont.

Pleospora herbarum (Pers. ex Fr.) Rabh. (Stemphylium botryosum Wallr.), leaf spot (secondary). Md.
Polyporus gilvus (Schw.) Fr., wood rot. Md.
P. versicolor L. ex Fr. Mo., N. Car., N. Y.
Sclerotinia sclerotiorum (Lib.) DBy., shoot blight. Wash.
Sphaeropsis syringae Pk. & Clint., on leaves & twigs (probably secondary). N. J., Pa.
Stereum purpureum Pers., wood rot. Okla.
Thielaviopsis basicola (Berk.) Ferr., root rot. Conn.

Graft blight, -- incompatibility of lilac scion on privet stock. Occasional. (A "graft blight" in England is attributed to a virus).
Mosaic (ring spot), ? virus. Mich., Minn.

WEATHER OF AUGUST AND OF THE SUMMER OF 1942

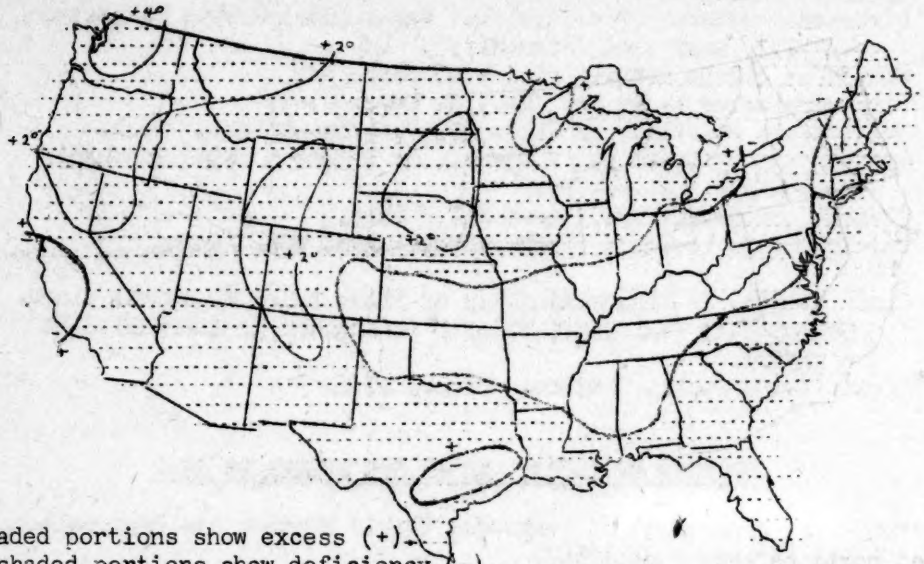
(From U. S. Department of Commerce, Weekly Weather and Crop Bulletin for week ending September 8, 1942).

THE WEATHER OF AUGUST 1942: Temperatures for August, as a whole, were remarkable for widespread uniformity in relation to normal, the monthly means being close to normal in nearly all sections of the country; the general rule was to slight excesses. Figure 1 shows that only limited areas had departures as great as 2°, all plus, with only a few stations in the extreme northwest showing as many as 4° above normal.

Precipitation for the month was much less evenly distributed, as shown on Figure 2. The extreme northeast and extreme southeast had rather large deficiencies, while the middle Atlantic area had one of the wettest Augusts of record. In general, the southern half of the country had above normal, except the Southeast, and the northern half below normal, except a few limited areas.

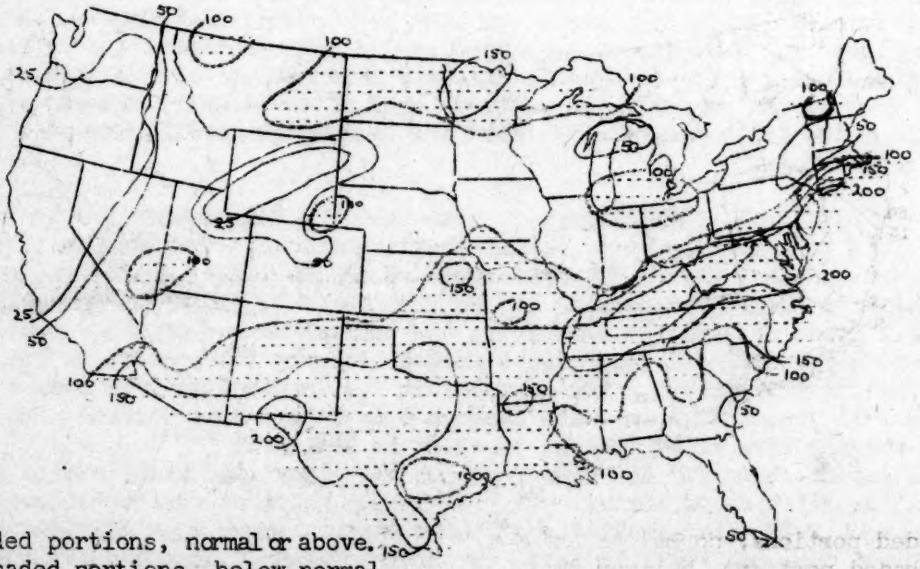
THE SUMMER OF 1942: Figure 3 shows that the temperature for the summer of 1942 was slightly above normal in all sections. The summer, like August, was noteworthy for uniformity of the average temperature in relation to normal; no section had as many as 2° below normal and only small areas exceeded 2° above. In the eastern United States, especially, there has been for a long time a marked tendency for summers to run above normal in temperature. For example, in Washington this last summer was the 13th consecutive one with average temperature above normal, the other 12 ranging from +0.6° in 1940 to +2.8° in 1930.

Figure 4 shows for the summer season the geographic distribution of rainfall in relation to normal. The relatively heaviest amounts occurred in the west Gulf area and Middle Atlantic States, where some stations reported from one-and-a-half to twice the normal amount. As a general rule, total falls were above normal over the eastern two-thirds of the country and below normal over the western third.



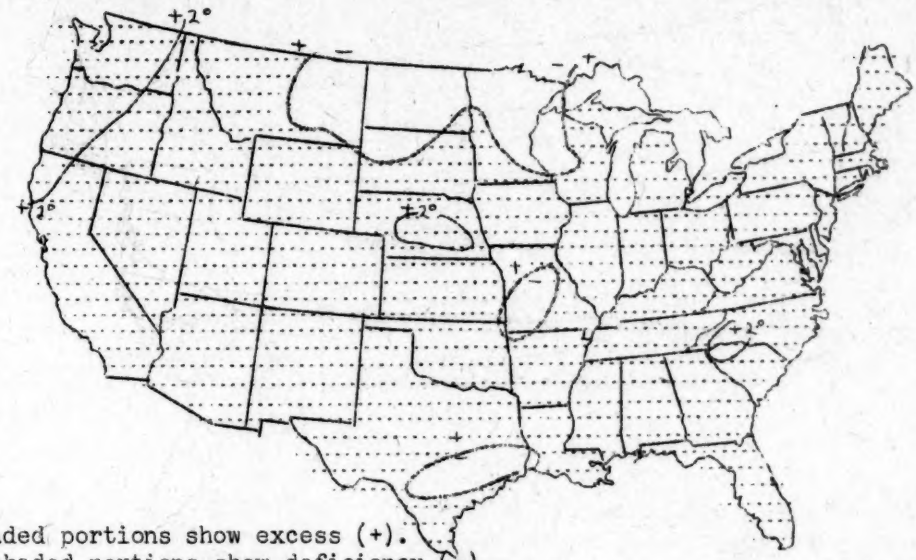
Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

Fig. 1. -- Departure of Mean Temperature from Normal, August 1942



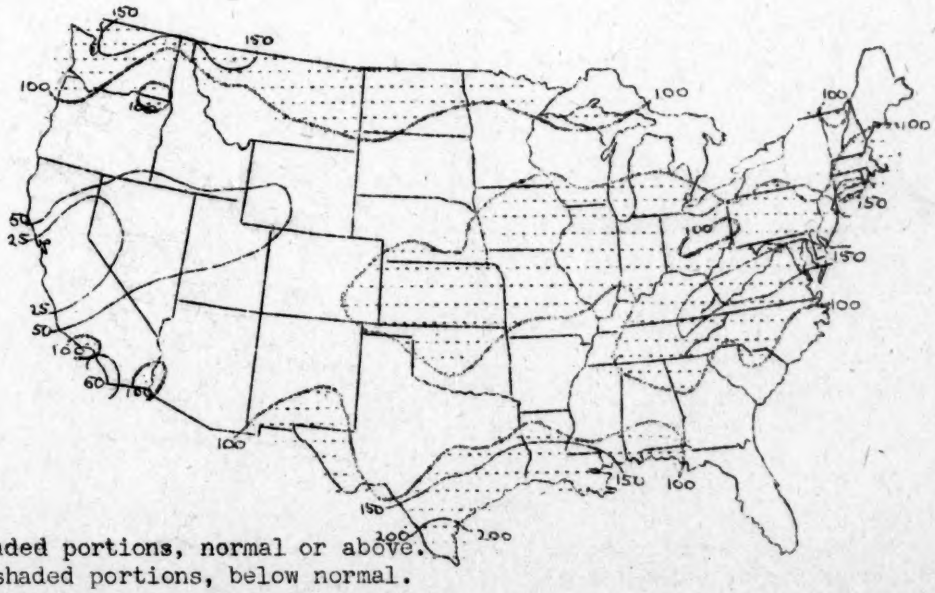
Shaded portions, normal or above.
Unshaded portions, below normal.
Lines show percentage of normal.

Fig. 2. -- Percentage of Normal Rainfall, August 1942



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

Fig. 3. -- Departure of Mean Temperature from Normal, for the Summer, June - Aug. 1942



Shaded portions, normal or above.
Unshaded portions, below normal.
Lines show percentage of normal.

Fig. 4. -- Percentage of Normal Rainfall for the Summer, June - Aug. 1942